

CLAIMS

1. Plug connection for producing at least one connection through an opening (39) in a partition wall (37), the plug connection comprising a first and second plug (1, 17), which can be plugged together, and at least one of the plugs (1, 17) can be sealed from the partition wall (37) via a seal (28) that surrounds the opening (39), and at least one of the plugs (1, 17) comprising a clamping device which can be engaged with the other plug (17, 1) and with which the plugs (1, 17) can be clamped permanently in their plugging-together direction (16) with interposition of the partition wall (37),
- 10 characterised in that the clamping device comprises at least one sealing device (162, 163) for sealing a connection region between the clamping device and the at least one plug (1, 17).
2. Plug connection according to claim 1, characterised in that the clamping device comprises at least one actuating element (178) which, for clamping the plugs (1, 17),
- 15 cooperates with an engagement element (176) arranged on one of the plugs (1, 17).
3. Plug connection according to at least one of the preceding claims, characterised in that the clamping device comprises a locking lever (160) which, for clamping the plugs (1, 17), is capable of pivoting about an axis of rotation (180) extending substantially transversely to the passage direction (38) through the partition wall (37).
- 20 4. Plug connection according to claim 3, characterised in that at least one tooth with involute tooth faces, which cooperates with at least one tooth of a rack as the engagement element (176), is arranged on the locking lever (160) as the actuating element (178).
5. Plug connection according to either claim 3 or claim 4, characterised in that the locking lever (160) comprises a base region and two leg regions, at least one bearing

projection (164), which is rotatably mounted in a corresponding bearing recess (168) of a plug (1, 17), being formed on the leg regions.

6. Plug connection according to at least one of the preceding claims, characterised in that the at least one sealing device (162) is formed by a resilient O-ring.

5 7. Plug connection according to at least one of the preceding claims, characterised in that the seal (28) is sprayed onto the plug (1, 17).

8. Plug connection according to at least one of the preceding claims, characterised in that the clamping device comprises a separate securing device (170) for locking the clamping device in a finally mounted state.

10 9. Plug connection according to claim 8, characterised in that the securing device (170) is movable in a direction transverse to the passage direction (38) through the partition wall (37).

10. Plug connection according to either claim 8 or claim 9, characterised in that the securing device 170 comprises a catch lug (172) for latching with a corresponding catching
15 opening (174) in the clamping device.

11. Plug connection according to either claim 1 or claim 2, characterised in that the clamping device comprises a sliding device (704) with at least one step-up or step-down arrangement (18, 19).

12. Plug in connection according to claim 11, characterised in that the clamping device
20 comprises a sliding device (704) which, for clamping the plugs (1, 17), is displaceable in a direction substantially transverse to the passage direction (38) through the partition wall.

13. Plug connection according to either claim 11 or claim 12, characterised in that the clamping device comprises at least one guide rail (18, 19) which extends at least in part in a

plane longitudinally to the plugging-together direction (16) and substantially transversely to the plugging-together direction (16).

14. Plug connection according to any one of claims 11 to 13, characterised in that the at least one sealing device (163) is formed on an opening of a first plug housing (2), through
5 which an engagement element of the clamping device dips.

15. Plug connection according to claim 14, characterised in that the sealing device (163) comprises at least one sealing lip.

16. Plug connection according to either claim 14 or claim 15, characterised in that at least one sealing projection (198) which cooperates with the sealing device (163) to seal the plug
10 connection, is formed on a second plug housing (25).

17. Plug connection according to at least one of the preceding claims, characterised in that the second plug (17) comprises a locking device (102) which is movable between a locked position, in which the second plug (17) is secured on the partition wall (37), and an unlocked position.

15 18. Plug connection according to claim 17, characterised in that the locking device (102) is displaceable relative to the second plug (17) in the direction in which the two plugs (1, 17) are plugged together.

19. Plug connection according to either claim 17 or claim 18, characterised in that at least one catching device (110) is arranged on the locking device (102) to secure the locking
20 device (102) in the locked position in cooperation with an associated latching opening (124).

20. Plug connection according to claim 19, characterised in the at least one catching device (110) cooperates with a further associated catching opening (126) in the unlocked position, to hold the locking device (102).

21. Plug connection according to claim 17, characterised in that the locking device (102) is mounted on the second plug housing (25) by means of a hinge-like connection (200) and is movable between the locked and the unlocked position by a pivoting movement about an axis extending substantially transversely to the passage direction (38) through the partition wall (37).
5 (37).

22. Plug connection according to at least one of the preceding claims, characterised in that the seal (18) and the sealing device (162, 163) are constructed in one piece.

23. Method of fitting for producing at least one connection through an opening (39) in a partition wall (37) using a plug connection, the plug comprising a first and second plug (1, 17), which are plugged together, and at least one of the plugs (1, 17) can be sealed from the partition wall (37) via a seal (28) that surrounds the opening (39), wherein the clamping device of at least one of the plugs (1, 17) can be engaged with the other plug (17, 1) and, using the clamping device, the plugs (1, 17) are clamped permanently in their plugging-together direction (16) with interposition of the partition wall (37), characterised in that the
10 (17), which are plugged together, and at least one of the plugs (1, 17) can be sealed from the partition wall (37) via a seal (28) that surrounds the opening (39), wherein the clamping device of at least one of the plugs (1, 17) can be engaged with the other plug (17, 1) and, using the clamping device, the plugs (1, 17) are clamped permanently in their plugging-together direction (16) with interposition of the partition wall (37), characterised in that the
15 clamping takes place with a pivoting movement about an axis transverse to the passage direction (38) through the partition wall (37).

24. Method of fitting according to claim 23, characterised in that the clamping device is fixed releasably in an end position.

25. Method of fitting according to at least one of claims 23 or 24, characterised in that at least one of the plugs (1, 17) is secured separately against movement counter to the passage direction (38) through the partition wall (37).
20 least one of the plugs (1, 17) is secured separately against movement counter to the passage direction (38) through the partition wall (37).

26. Method of fitting according to at least one of claims 23 to 25, characterised in that at least one of the plugs (1, 17) is arrested, in the passed-through state, in a direction substantially transverse to the passage direction (38).

27. Plug connection for producing at least one electrical connection through an opening in a partition wall (37), wherein the plug connection (100) comprises a first and a second plug (1, 17), which can be plugged together, and at least the second plug (17) can be fixed on the partition wall (37) via a mechanical holding device, wherein the mechanical holding device
5 comprises a locking device (102), which is movable between a locked position, in which the second plug (17) is secured on the partition wall (37), and an unlocked position, wherein the locking device (102) is mounted on the second plug housing (25) by means of a hinge-like connection (200) and is movable between the locked and the unlocked position by a pivoting movement about an axis (202) extending substantially transversely to the passage direction
10 (38) through the partition wall (37).

28. Plug connection according to claim 27, characterised in that the locking device (102) is arranged in the unlocked position in such a way that the two plugs (1, 17) cannot be connected.

29. Plug connection according to claim 28, characterised in that the locking device
15 comprises an edge region (204) which is remote from the axis (202) and, in the unlocked state, is arranged in such a way relative to the second plug housing (25) that the two plugs (1, 17) cannot be plugged together.

30. Plug connection according to any one of claims 27 to 29, characterised in that at least one catching device (110) is arranged on the locking device (102) to secure the locking
20 device (102) in the locked position in cooperation with an associated catching opening (124).

31. Plug connection according to claim 30, characterised in the at least one catching device (110) cooperates with a further associated catch opening (126) in the unlocked position, to hold the locking device (102).

32. Plug connection according to any one of claims 27 to 31, characterised in that the locking device in the second plug housing (25) is mounted in a guide groove (142).

33. Method of fitting for producing at least one electrical plug connection, which can be plugged together, through an opening in a partition wall, wherein the plug connection
5 comprises a first and a second plug and at least the second plug can be fixed on the partition wall via a mechanical holding device, with the following steps:

positioning of the second plug on a first edge region of the opening in the partition wall, a locking device being located in its unlocked position,

tilting of the first plug about the first edge region as an axis of rotation until the first
10 plug reaches a position in which it can be locked,

moving of the locking device into its locked position, the locking device being mounted on the second plug housing by means of a hinge-like connection and being moved from the locked position into the unlocked position by a pivoting movement about an axis extending substantially transversely to the passage direction through the partition wall.